



## Temperature extremes and health: Impacts of climate variability and change in the United States

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### Abstract:

**OBJECTIVE:** We evaluated temperature-related morbidity and mortality for the 2007 U.S. national assessment on impacts of climate change and variability on human health. **METHODS:** We assessed literature published since the 2000 national assessment, evaluating epidemiologic studies, surveys, and studies projecting future impacts. **RESULTS:** Under current climate change projections, heat waves and hot weather are likely to increase in frequency, with the overall temperature distribution shifting away from the colder extremes. Vulnerable subgroups include communities in the northeastern and Midwestern U.S.; urban populations, the poor, the elderly, children, and those with impaired health or limited mobility. **CONCLUSIONS:** Temperature extremes and variability will remain important determinants of health in the United States under climate change. Research needs include estimating exposure to temperature extremes; studying nonfatal temperature-related illness; uniform criteria for reporting heat-related health outcomes; and improving effectiveness of urban heat island reduction and extreme weather response plans.

**Source:** <http://dx.doi.org/10.1097/JOM.0b013e318173e122>

### Resource Description

#### Exposure :

weather or climate related pathway by which climate change affects health

Temperature

**Temperature:** Extreme Cold, Extreme Heat, Fluctuations

#### Geographic Feature:

resource focuses on specific type of geography

Urban

#### Geographic Location:

resource focuses on specific location

United States

#### Health Impact:

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specification of health effect or disease related to climate change exposure

Cardiovascular Effect, Injury, Morbidity/Mortality, Other Health Impact

**Cardiovascular Effect:** Other Cardiovascular Effect

**Cardiovascular Disease (other):** cardiovascular hospital admissions

**Other Health Impact:** heat stroke

**Intervention:** 

strategy to prepare for or reduce the impact of climate change on health

A focus of content

**Mitigation/Adaptation:** 

mitigation or adaptation strategy is a focus of resource

Adaptation, Mitigation

**Model/Methodology:** 

type of model used or methodology development is a focus of resource

Exposure Change Prediction, Outcome Change Prediction

**Population of Concern:** A focus of content

**Population of Concern:** 

populations at particular risk or vulnerability to climate change impacts

Children, Elderly, Low Socioeconomic Status, Racial/Ethnic Subgroup

**Other Racial/Ethnic Subgroup:** African Americans

**Other Vulnerable Population:** people with chronic disease

**Resource Type:** 

format or standard characteristic of resource

Review

**Resilience:** 

capacity of an individual, community, or institution to dynamically and effectively respond or adapt to shifting climate impact circumstances while continuing to function

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**Timescale:** 

time period studied

Long-Term (>50 years)

**Vulnerability/Impact Assessment:** 

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

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